

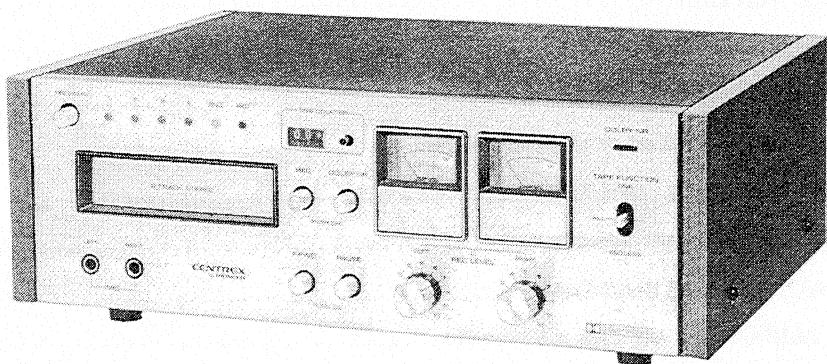
RH-65

KU
KC



8 TRACK HOME STEREO RECORDING DECK

SERVICE MANUAL



SPECIFICATIONS

Semi-Conductors.....	2 IC's, 17 transistors, 16 diodes, 1 thyristor
Power Source	AC 120V 60 Hz
Power Consumption	No more than 30W
Cartridge	Any 8 track cartridges
Wow and Flutter	No more than 0.15% (WRMS)
Fast Forward Time	Approx. 2 times
Frequency Response	30 ~ 15,000 Hz
Cross Talk	More than 45 dB
Signal to Noise Ratio	More than 45 dB
Input Level.....	Mic: 0.5 mV (Typical) Line: 100 mV (Typical)
Input Impedance	Line: 100 kΩ
Output Level	Line: 580 mV
Output Impedance.....	Line: 80Ω

RECORDING SECTION

Erasing Ratio.....	More than 50 dB
Dimensions (W x H x D).....	375 x 115 x 275 mm (14-3/4 x 4-1/2 x 10-7/8 in.)
Weight.....	6.1 kg (13.4 lbs.)

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Note:

Specifications and the design subject to possible modification
without notice due to improvements.

CENTREX
by PIONEER

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1. PARTS LOCATION

RH-65

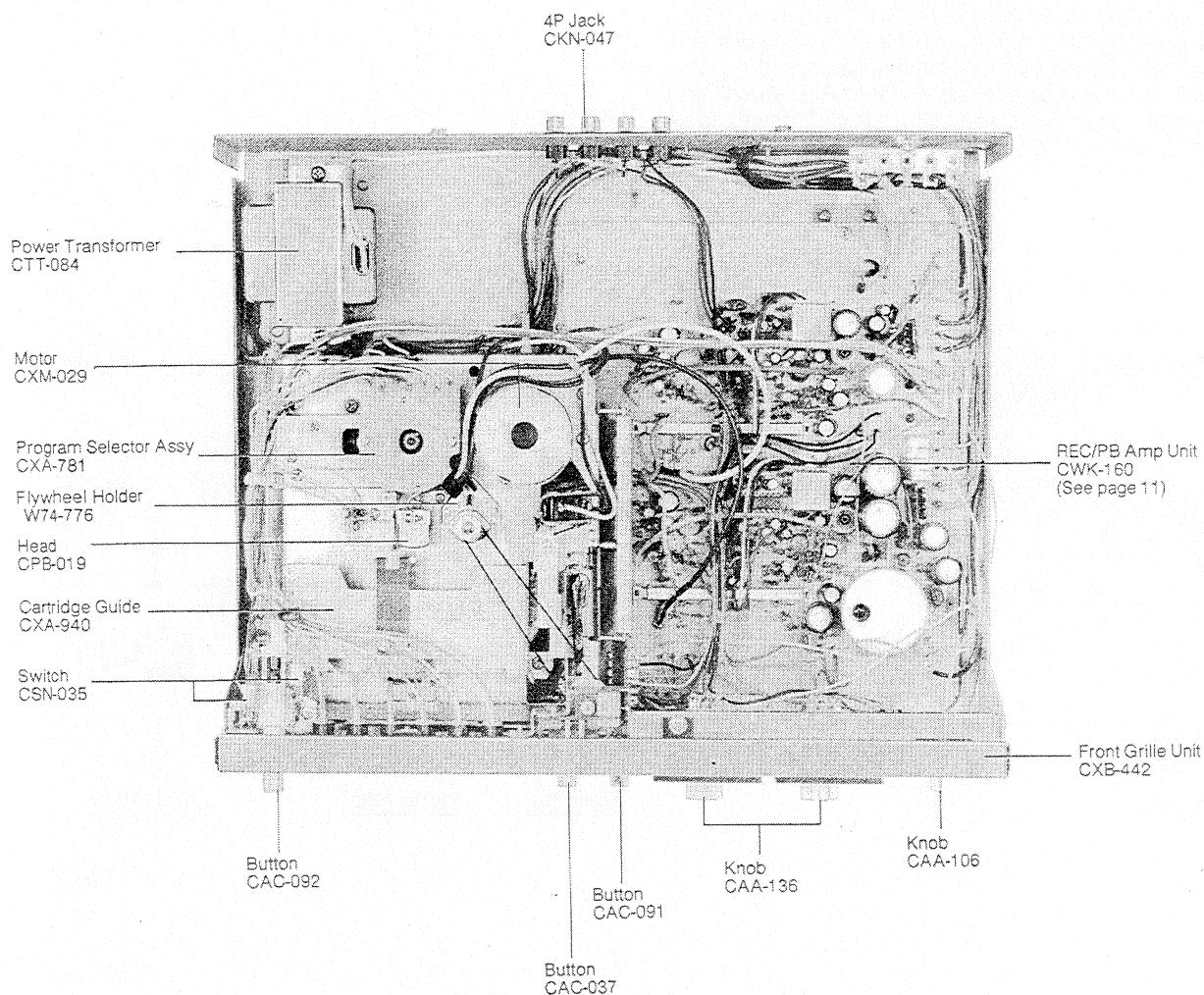


Fig.1

2. CIRCUIT DESCRIPTION

• Recording Mode

NPN-NPN two-stage direct-coupled amplifiers (Q1, Q3) function as Microphone Amplifiers on "RECORD". With Microphone jack inserted in MIC, Line In is switched to MIC. Output at Line Out is 580mV with 400Hz at approximately 0.6mV input.

VR1 is the REC Level Control. Line Out terminal can be used as REC Monitor. And even when Dolby switch (S4) is ON, the frequency characteristics are flat.

The output (No. 7 terminal) of Dolby IC is added to REC Amplifiers (Q9, Q11). Meter Amplifier (Q7) activates Level Meter via Voltage Doubler Rectifier Circuits (D1, D3). Q9 and Q11 (two-stage direct-coupled REC Amplifiers) regulate the recording current with a Base Circuit and an Emitter Circuit (L1, C51).

R55, C45 and L1, C51 (Emitter Circuits) are high-frequency compensation circuits; R57 and C47 are low-frequency compensation circuits.

VR3 is a semifixed resistor for adjusting recording current.

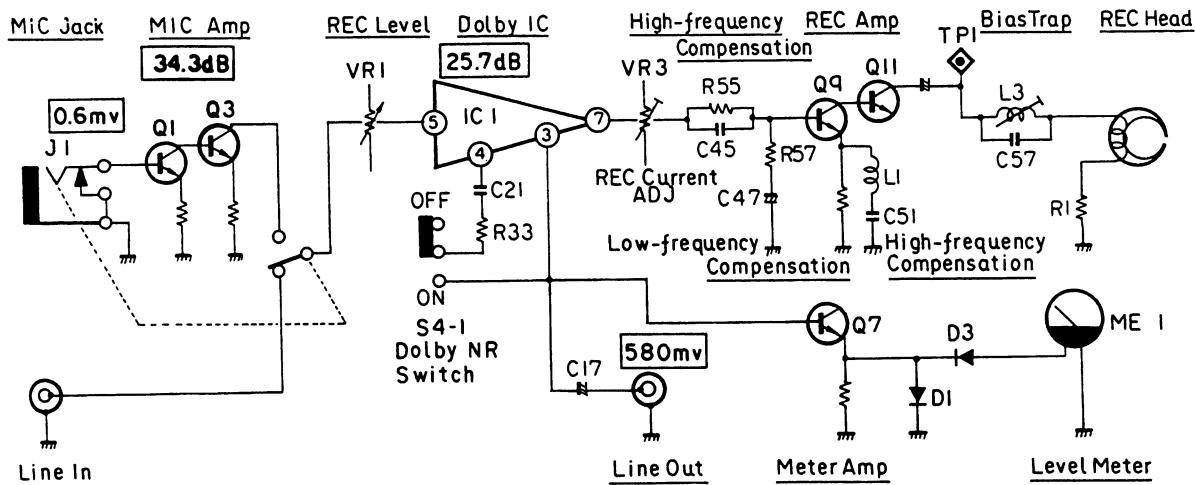


Fig.2

CIRCUIT DESCRIPTION ||||||| RH-65

• Playback Mode

When playing back, Q1 and Q3 function as NAB equalizer amplifiers. VR1 is a semifixed resistor for adjusting playback level. Q5 is a muting circuit for F.F. The signal added to No. 5 terminal of Dolby IC functions as same as it does when recording.

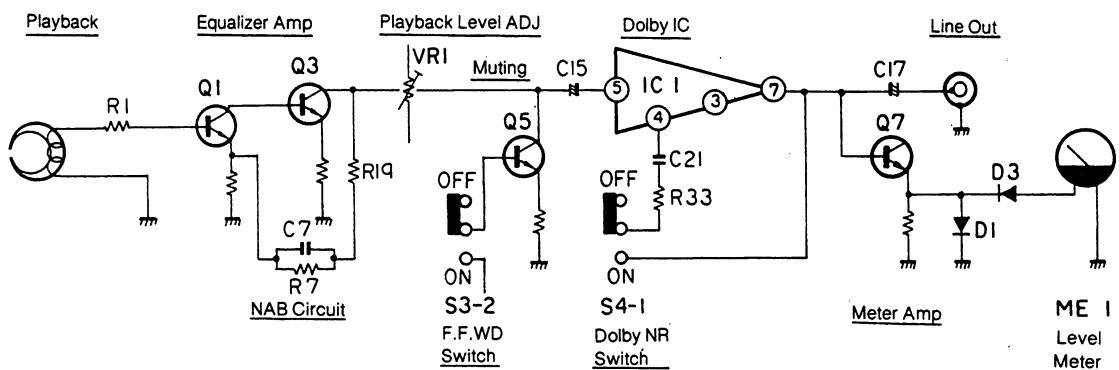


Fig.3

3. DISASSEMBLY

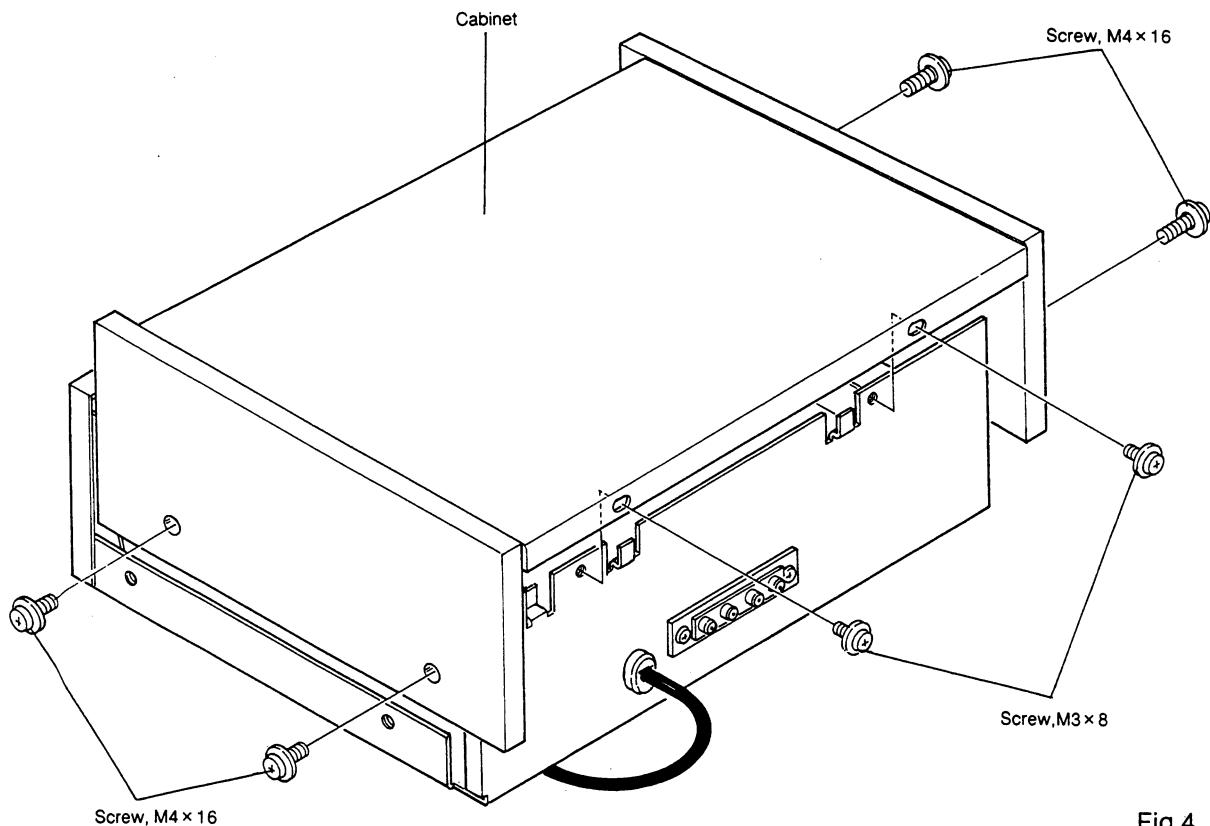


Fig.4

4. ADJUSTMENT

4.1 HEAD ADJUSTMENT

- Connection Diagram

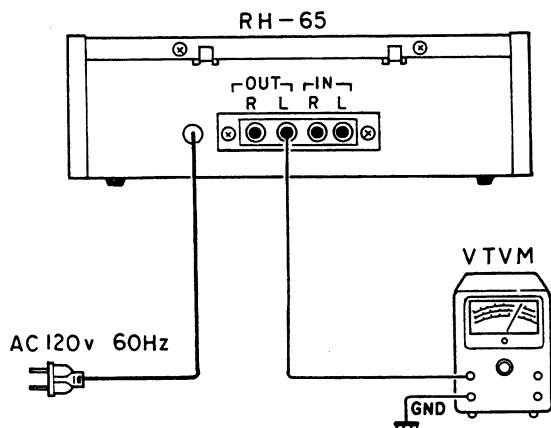


Fig.5

- Test Tape

Item	Test tape	PST-4.2	P-328
Recording track	Full tracks	1, 3, 5, 7	
Frequency	8 kHz	400 Hz	
Level	-13 dB	0 dB	
Application	Azimuth	Cross talk	

- Azimuth Adjustment

1. Insert test tape PST-4.2 and change over program to "3". Adjust by turning azimuth adjusting screw so that the VTVM indicates maximum reading. After completion of adjustment, fasten the adjusting screw by using screwlock adhesive.

- Cross Talk Adjustment

1. Insert test tape P-328 and set program to "2" and adjust by turning cross talk adjusting nut so that the VTVM indicates minimum reading.
2. Change over program "3" and confirm that the VTVM indicates maximum reading. If maximum output is not obtained, repeat steps from 1 to 2.

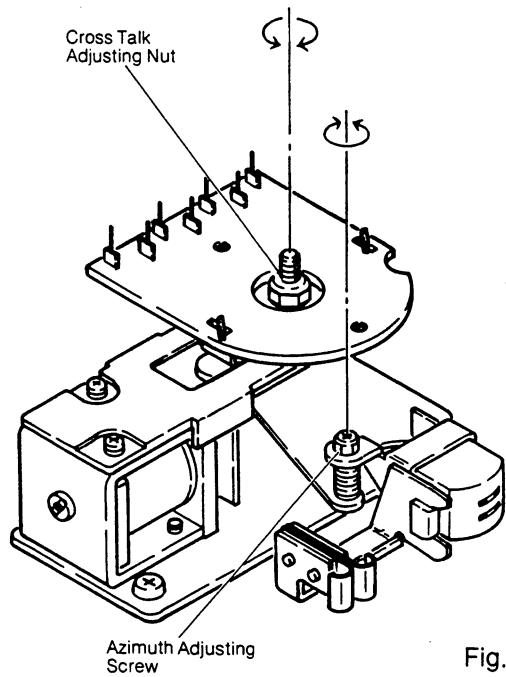


Fig. 6

4.2 PLAYBACK LEVEL ADJUSTMENT

• Connection Diagram

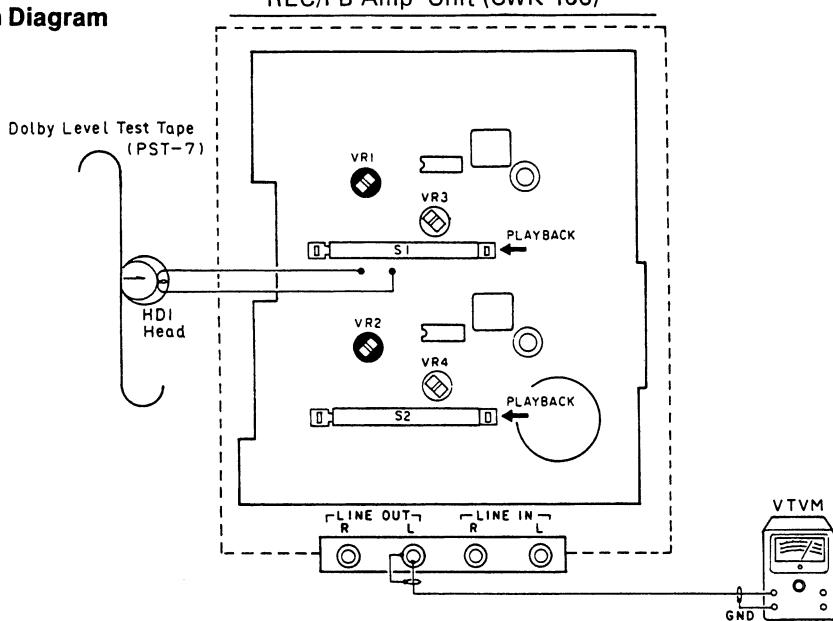


Fig. 7

• To Adjust

1. With Dolby level test tape (PST-7) loaded, adjust the playback level control semifixed resistors (VR1 and VR2) so that output level of Line Out reaches 580mV.

4.3 BIAS AND BIAS TRAP ADJUSTMENT

• Connection Diagram

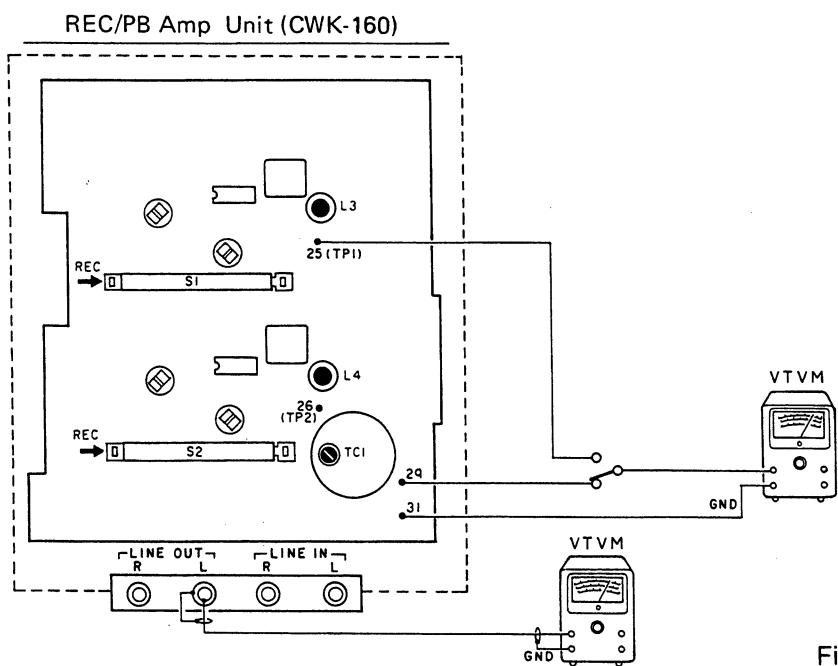


Fig. 8

• To Adjust

1. With the equipment in recording mode, turn Record Level control to the minimum.
2. Connect VTVM across terminals 29 and 31(GND), and adjust the bias control ceramic trimmer (TC1) so that output level reaches 90mV.
3. Connect VTVM across terminals 25 (TP1), 26 (TP2) and 31(GND) and adjust L3 and L4 so the output level is

minimized.

4. Connect VTVM to Line Out. Ascertain that the reading on VTVM is less than -50dBm.

NOTE:

If not, check to see if Bottom Plate is installed or if Head is properly wired.

ADJUSTMENT

4.4 CONFIRM THE INDICATION OF LEVEL METER

REC/PB Amp Unit (CWK-160)

- Connection Diagram

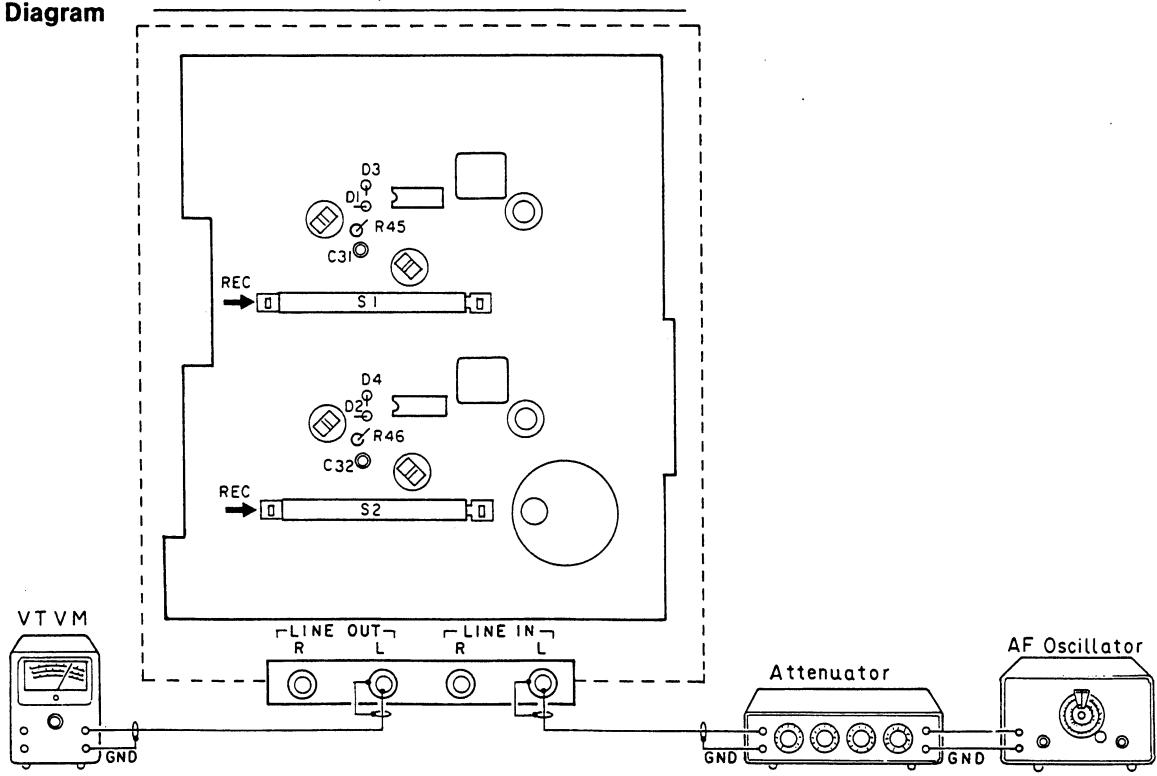


Fig. 9

- To Adjust

1. Add a 400Hz, -20dBm signal at Line In.
2. Adjust Record Level Control so that the pointer of Level Meter will come to +2 point (Dolby mark). Check

to make sure the output level of Line Out sets 580mV ± 1 dB. If Level Meter does not indicate +2 point, check D1~D4, C31, C32, R45 and R46 circuits.

4.5 RECORD/PLAYBACK LEVEL ADJUSTMENT

- Connection Diagram

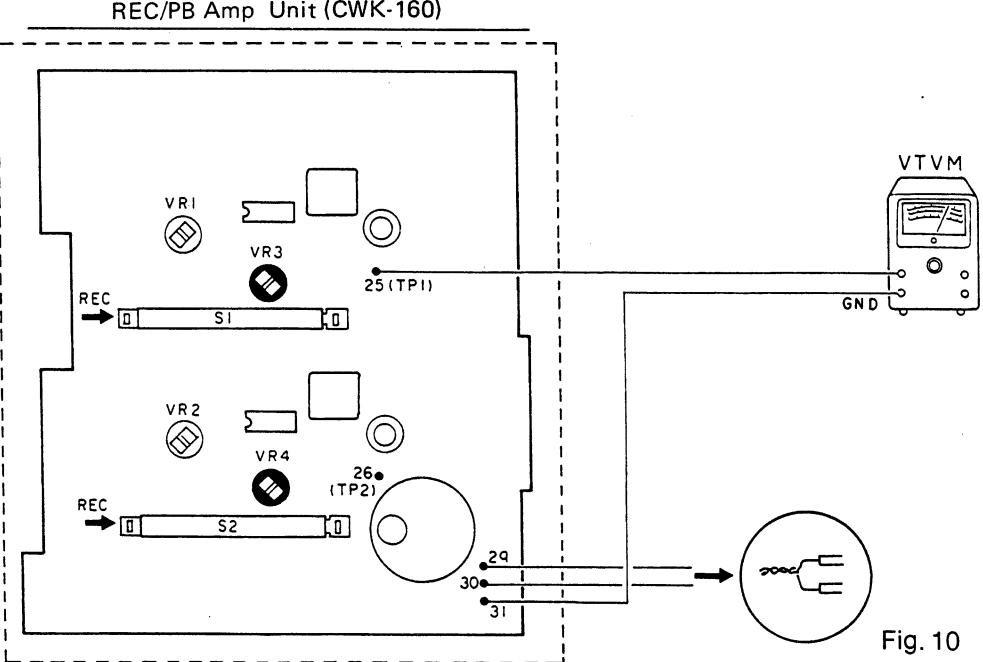


Fig. 10

- **To Adjustment**

1. Add a 400Hz, -20dBm signal at Line In. With the equipment in recording mode, adjust Record Level control so the output level of Line Out is 580mV/400Hz (show in Fig. 9).
2. Make a recording on Scotch #157 (or Scotch high-output/low-noise) tape under the above condition. Be sure the playback output level of Line Out, when this tape is played back, is 580mV.
3. If not 580mV make a note of the error in terms of decibels.
4. Remove terminals 29 and 30 to be shorted, and reset the unit at recording mode. Connect VTVM across terminals 25 (TP1), 26 (TP2) and 31 (GND) and note its reading. Adjust to record level control semifixed resistor (VR3 and VR4) to compensate for the above error.
5. Repeat the above adjustments until playback output level reaches 580mV.

4.6 RECORDING CURRENT ADJUSTMENT

- **Connection Diagram**

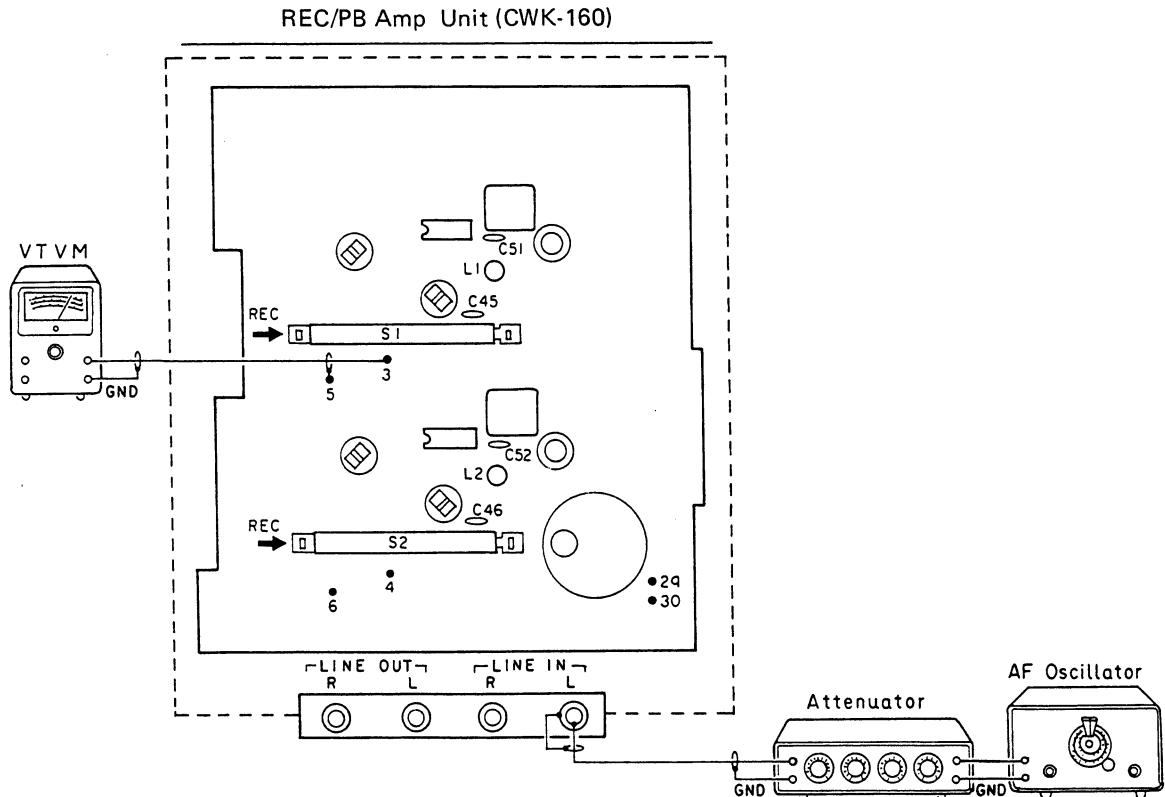


Fig. 11

- **To Adjust**

1. Short the terminals 29 and 30 (see step 4, Record/playback Level Adjustment).
2. Add a 400Hz, -20dBm signal at Line In, and connect VTVM to either end of terminals 3, 5 and 4, 6. With the equipment in recording mode, adjust Record Level control so output level is at -70dBm.
3. It can then be judged that the unit is operating normally if the output level is increased by about 8dB when input is increased to 5kHz, and by about 17 dB when input increased to 10kHz.

If the output level is not proper, check C45, C46, L1, L2, C51 and C52 circuits, or replace Head if it is functioning properly.

NOTE:

Be sure to make Playback Level Adjustment and Record/playback Level Adjustment.

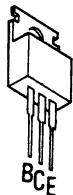


- **IC and Transistors**

2SC644
2SC828
2SC1318



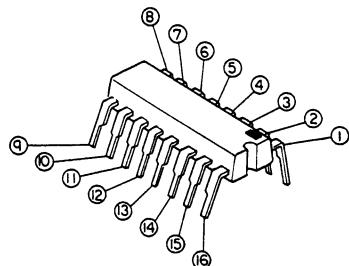
2SC1061



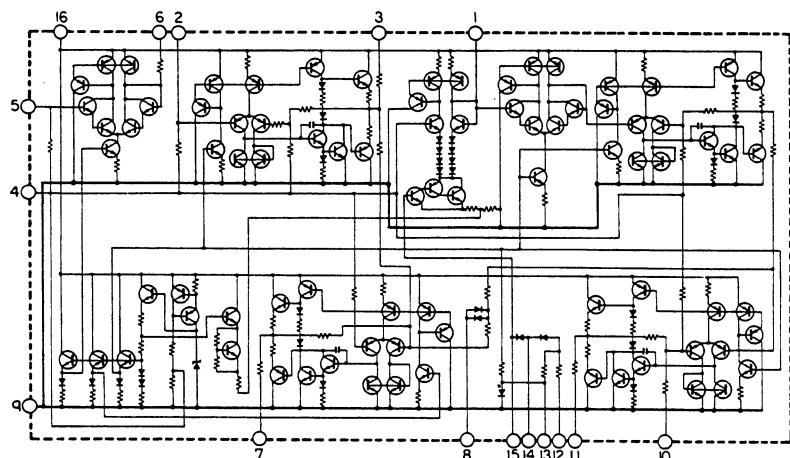
2SD471



CR860B



CR860B



• Parts List

NOTICE: Of the descriptive symbols of the resistor and capacitor, the encircled alphabetic letter denotes the allowable error.

Example: RD1/4VS100 (J)
CEA100 (P) 25

C: $\pm 0.25\text{pF}$	F: $\pm 1\text{pF}$	J: $\pm 5\%$	M: $\pm 20\%$	Z: $^{+80\%}_{-20\%}$
D: $\pm 0.5\text{pF}$	G: $\pm 2\%$	K: $\pm 10\%$	X: $^{+40\%}_{-20\%}$	P: $^{+100\%}_{-10\%}$

MISCELLANEOUS

Ref. Key	Parts No.	Description
IC1	CR860B	IC ✓
IC2	CR860B	IC
Q1	2SC644-R, S, T	Transistor
Q2	2SC644-R, S, T	Transistor
Q3	2SC644-R, S, T	Transistor
Q4	2SC644-R, S, T	Transistor
Q5	2SC828-Q, R, S	Transistor
Q6	2SC828-Q, R, S	Transistor
Q7	2SC828-Q, R, S	Transistor
Q8	2SC828-Q, R, S	Transistor
Q9	2SC644-R, S, T	Transistor
Q10	2SC644-R, S, T	Transistor
Q11	2SC644-R, S, T	Transistor
Q12	2SC644-R, S, T	Transistor
Q13	2SC1318-Q, R	Transistor ✓ Changed
Q14	2SC1318-Q, R	Transistor ✓ Changed
Q15	2SC1061-B, C	Transistor
Q16	2SC828-Q, R, S	Transistor
Q17	2SD471	Transistor ✓
SCR1	CR02AM-1	Thyristor ✓ Changed
D1	1N60	Diode
D2	1N60	Diode
D3	1N60	Diode
D4	1N60	Diode
D5	1N60	Diode
D6	1N60	Diode
D7	1S1886	Diode
D8	1S1886	Diode
D9	1S1886	Diode
D10	1S1555	Diode

2SD471
02AM-1

Ref. Key	Parts No.	Description
D11	RD24E-B	Diode
D12	10DS-2	Diode
D13	10DS-2	Diode
D14	1S1555	Diode
D15	1S1555	Diode
S1	CSH-023	Switch
S2	CSH-023	Switch
S3	CSG-083	Switch
L1	CTF-061	Coil, 8.2mH ✓
L2	CTF-061	Coil, 8.2mH
L3	CTX-032	Coil
L4	CTX-032	Coil
L5	CTF-029	Ferri-Inductor, 10mH
F1	CWX-226	Filter ✓
F2	CWX-226	Filter
T1	CTX-027	Transformer ✓
TC1	CCL-024	Ceramic Trimmer, 100pF
VR1	C92-618	Volume, 4.7kΩ (B)
VR2	C92-618	Volume, 4.7kΩ (B)
VR3	C92-618	Volume, 4.7kΩ (B)
VR4	C92-618	Volume, 4.7kΩ (B)

RESISTORS

Ref. Key	Parts No.	Description		
R1	RD1/4VS101J	Resistor	100Ω	1/4W
R2	RD1/4VS101J	Resistor	100Ω	1/4W
R3	RD1/4VS222J	Resistor	2.2kΩ	1/4W
R4	RD1/4VS222J	Resistor	2.2kΩ	1/4W
R5	RD1/4VS224JNL	Resistor	220kΩ	1/4W

Ref. Key	Parts No.	Description		
R6	RD1/4VS224JNL	Resistor	220kΩ	1/4W
R7	RD1/4VS334JNL	Resistor	330kΩ	1/4W
R8	RD1/4VS334JNL	Resistor	330kΩ	1/4W
R9	RD1/4VS334JNL	Resistor	330kΩ	1/4W
R10	RD1/4VS334JNL	Resistor	330kΩ	1/4W

REC/PB AMP UNIT (CWK-160)

Ref. Key	Parts No.	Description			Ref. Key	Parts No.	Description		
R11	RD1/4VS102J	Resistor	1kΩ	1/4W	R56	RD1/4VS823J	Resistor	82kΩ	1/4W
R12	RD1/4VS102J	Resistor	1kΩ	1/4W	R57	RD1/4VS432J	Resistor	4.3kΩ	1/4W
R13	RD1/4VS123J	Resistor	12kΩ	1/4W	R58	RD1/4VS432J	Resistor	4.3kΩ	1/4W
R14	RD1/4VS123J	Resistor	12kΩ	1/4W	R59	RD1/4VS123J	Resistor	12kΩ	1/4W
R15	RD1/4VS681J	Resistor	680Ω	1/4W	R60	RD1/4VS123J	Resistor	12kΩ	1/4W
R16	RD1/4VS681J	Resistor	680Ω	1/4W	R61	RD1/4VS224JNL	Resistor	220kΩ	1/4W
R17	RD1/4VS681J	Resistor	680Ω	1/4W	R62	RD1/4VS224JNL	Resistor	220kΩ	1/4W
R18	RD1/4VS681J	Resistor	680Ω	1/4W	R63	RD1/4VS563J	Resistor	56kΩ	1/4W
R19	RD1/4VS303J	Resistor	30kΩ	1/4W	R64	RD1/4VS563J	Resistor	56kΩ	1/4W
R20	RD1/4VS303J	Resistor	30kΩ	1/4W	R65	RD1/4VS222J	Resistor	2.2kΩ	1/4W
R21	RD1/4VS223J	Resistor	22kΩ	1/4W	R66	RD1/4VS222J	Resistor	2.2kΩ	1/4W
R22	RD1/4VS223J	Resistor	22kΩ	1/4W	R67	RD1/4VS101J	Resistor	100Ω	1/4W
R23	RD1/4VS472J	Resistor	4.7kΩ	1/4W	R68	RD1/4VS101J	Resistor	100Ω	1/4W
R24	RD1/4VS472J	Resistor	4.7kΩ	1/4W	R69	RF1/4VS273J	Resistor	27kΩ	1/4W
R25	RD1/4VS332J	Resistor	3.3kΩ	1/4W	R70	RD1/4VS273J	Resistor	27kΩ	1/4W
R26	RD1/4VS332J	Resistor	3.3kΩ	1/4W	R71	RD1/4VS392J	Resistor	3.9kΩ	1/4W
R27	RD1/4VS101J	Resistor	100Ω	1/4W	R72	RD1/4VS392J	Resistor	3.9kΩ	1/4W
R28	RD1/4VS101J	Resistor	100Ω	1/4W	R73	RD1/4VS391J	Resistor	390Ω	1/4W
R29	VACANT				R74	RD1/4VS391J	Resistor	390Ω	1/4W
R30	VACANT				R75	RD1/4VS471J	Resistor	470Ω	1/4W
R31	RD1/4PS102J	Resistor	1kΩ	1/4W	R76	RD1/4VS471J	Resistor	470Ω	1/4W
R32	RD1/4PS102J	Resistor	1kΩ	1/4W	R77	RD1/4VS682J	Resistor	6.8kΩ	1/4W
R33	RD1/4VS181J	Resistor	180Ω	1/4W	R78	RD1/4VS682J	Resistor	6.8kΩ	1/4W
R34	RD1/4VS181J	Resistor	180Ω	1/4W	R79	RD1/4VS223J	Resistor	22kΩ	1/4W
R35	RD1/4VS332J	Resistor	3.3kΩ	1/4W	R80	RD1/4VS332J	Resistor	3.3kΩ	1/4W
R36	RD1/4VS332J	Resistor	3.3kΩ	1/4W	R81	RD1/4VS273J	Resistor	27kΩ	1/4W
R37	RD1/4VS103J	Resistor	10kΩ	1/4W	R82	RD1/4VS332J	Resistor	3.3kΩ	1/4W
R38	RD1/4VS103J	Resistor	10kΩ	1/4W	R83	RD1/4VS220J	Resistor	22Ω	1/4W
R39	RD1/4VS473J	Resistor	47kΩ	1/4W	R84	RD1/4VS220J	Resistor	22Ω	1/4W
R40	RD1/4VS473J	Resistor	47kΩ	1/4W	R85	RD1/4VS100J	Resistor	10Ω	1/4W
R41	RD1/4VS104J	Resistor	100kΩ	1/4W	R86	RD1/4VS152J	Resistor	1.5kΩ	1/4W
R42	RD1/4VS104J	Resistor	100kΩ	1/4W	R87	RD1/4VS152J	Resistor	1.5kΩ	1/4W
R43	RD1/4VS181J	Resistor	180Ω	1/4W	R88	RD1/4VS332J	Resistor	3.3kΩ	1/4W
R44	RD1/4VS181J	Resistor	180Ω	1/4W	R89	RD1/4VS822J	Resistor	8.2kΩ	1/4W
R45	RD1/4VS511J	Resistor	510Ω	1/4W	R90	RD1/4VS182J	Resistor	1.8kΩ	1/4W
R46	RD1/4VS511J	Resistor	510Ω	1/4W	R91	RD1/4VS222J	Resistor	2.2kΩ	1/4W
R47	RD1/4VS154J	Resistor	150kΩ	1/4W	R92	RD1/4VS221J	Resistor	220Ω	1/4W
R48	RD1/4VS154J	Resistor	150kΩ	1/4W	R93	RD1/4VS103J	Resistor	10kΩ	1/4W
R49	RD1/4VS684J	Resistor	680kΩ	1/4W	R94	RD1/4VS681J	Resistor	680Ω	1/4W
R50	RD1/4VS684J	Resistor	680kΩ	1/4W	R95	RD1/4VS102J	Resistor	1kΩ	1/4W
R51	RD1/4VS274J	Resistor	270kΩ	1/4W	R96	RS1P560J	Resistor	56Ω	1W
R52	RD1/4VS274J	Resistor	270kΩ	1/4W	R97	RS1P390J	Resistor	39Ω	1W
R53	RD1/4VS561J	Resistor	560Ω	1/4W	R98	RS1P560J	Resistor	56Ω	1W
R54	RD1/4VS561J	Resistor	560Ω	1/4W	R99	RS1P560J	Resistor	56Ω	1W
R55	RD1/4VS823J	Resistor	82kΩ	1/4W	R100	RS1P101K	Resistor	100Ω	1W

Ref. Key	Parts No.	Description		
R101	RS3P271J	Resistor	270Ω	3W
R102	RS3P271J	Resistor	270Ω	3W
R103	RS2P221J	Resistor	220Ω	2W
R104	RS3P271J	Resistor	270Ω	3W
R105	RD1/4VS561J	Resistor	560Ω	1/4W

Ref. Key	Parts No.	Description		
R106	RD1/4VS561J	Resistor	560Ω	1/4W

CAPACITORS

Ref. Key	Parts No.	Description		
C1	CCDSL121J50	Capacitor	120pF	50V
C2	CCDSL121J50	Capacitor	120pF	50V
C3	CEA3R3P50	Capacitor	3.3μF	50V
C4	CEA3R3P50	Capacitor	3.3μF	50V
C5	CCDSL330K50	Capacitor	33pF	50V
C6	CCDSL330K50	Capacitor	33pF	50V
C7	CQMA332J50	Capacitor	3300pF	50V
C8	CQMA332J50	Capacitor	3300pF	50V
C9	CEA4R7P35	Capacitor	4.7μF	35V
C10	CEA4R7P35	Capacitor	4.7μF	35V
C11	CEA2R2P50	Capacitor	2.2μF	50V
C12	CEA2R2P50	Capacitor	2.2μF	50V
C13	CEA101P35	Capacitor	100μF	35V
C14	CEA101P35	Capacitor	100μF	35V
C15	CSZAR33M35	Capacitor	0.33μF	35V
C16	CSZAR33M35	Capacitor	0.33μF	35V
C17	CEA100P16	Capacitor	10μF	16V
C18	CEA100P16	Capacitor	10μF	16V
C19	CEA100P16	Capacitor	10μF	16V
C20	CEA100P16	Capacitor	10μF	16V
C21	CQMA562J50	Capacitor	5600pF	50V
C22	CQMA562J50	Capacitor	5600pF	50V
C23	CEA100P16	Capacitor	10μF	16V
C24	CEA100P16	Capacitor	10μF	16V
C25	CQMA472J50	Capacitor	4700pF	50V
C26	CQMA472J50	Capacitor	4700pF	50V
C27	CQMA273J50	Capacitor	0.027μF	50V
C28	CQMA273J50	Capacitor	0.027μF	50V
C29	CEA100P16	Capacitor	10μF	16V
C30	CEA100P16	Capacitor	10μF	16V
C31	CEA3R3P50	Capacitor	3.3μF	50V
C32	CEA3R3P50	Capacitor	3.3μF	50V
C33	CQMA473J50	Capacitor	0.047μF	50V
C34	CQMA473J50	Capacitor	0.047μF	50V
C35	CEA100P16	Capacitor	10μF	16V

Ref. Key	Parts No.	Description		
C36	CEA100P16	Capacitor	10μF	16V
C37	CEA010P50	Capacitor	1μF	50V
C38	CEA010P50	Capacitor	1μF	50V
C39	CQMA104J50	Capacitor	0.1μF	50V
C40	CQMA104J50	Capacitor	0.1μF	50V
C41	CSZAR33M35	Capacitor	0.33μF	35V
C42	CSZAR33M35	Capacitor	0.33μF	35V
C43	CEA471P16	Capacitor	470μF	16V
C44	CEA471P16	Capacitor	470μF	16V
C45	CQMA152J50	Capacitor	1500pF	50V
C46	CQMA152J50	Capacitor	1500pF	50V
C47	CSZAR33M35	Capacitor	0.33μF	35V
C48	CSZAR33M35	Capacitor	0.33μF	35V
C49	CEA2R2P50	Capacitor	2.2μF	50V
C50	CEA2R2P50	Capacitor	2.2μF	50V
C51	CQMA123J50	Capacitor	0.012μF	50V
C52	CQMA123J50	Capacitor	0.012μF	50V
C53	CEA470P10	Capacitor	47μF	10V
C54	CEA470P10	Capacitor	47μF	10V
C55	CEA100P35	Capacitor	10μF	35V
C56	CEA100P35	Capacitor	10μF	35V
C57	CKDYB221J50	Capacitor	220pF	50V
C58	CKDYB221J50	Capacitor	220pF	50V
C59	CEA100P35	Capacitor	10μF	35V
C60	CEA100P35	Capacitor	10μF	35V
C61	CEA220P10	Capacitor	22μF	10V
C62	CEA221P25	Capacitor	220μF	25V
C63	CQMA332J50	Capacitor	3300pF	50V
C64	CQMA332J50	Capacitor	3300pF	50V
C65	CQMA103J50	Capacitor	0.01μF	50V
C66	CQMA104J50	Capacitor	0.1μF	50V
C67	CQMA473M50	Capacitor	0.047μF	50V
C68	CEA101P50	Capacitor	100μF	50V
C69	CEA100P50	Capacitor	10μF	50V
C70	CQMA473M50	Capacitor	0.047μF	50V

REC/PB AMP UNIT (CWK-160)

Ref. Key	Parts No.	Description		
C71	CEA331P50	Capacitor	330 μ F	50V
C72	CEA102P50	Capacitor	1000 μ F	50V
C73	CEA102P50	Capacitor	1000 μ F	50V
C74	CEA470P16	Capacitor	47 μ F	16V
C75	CEA100P16	Capacitor	10 μ F	16V

Ref. Key	Parts No.	Description		
C76	CEA102P25	Capacitor	1000 μ F	25V
C77	CKDYB181J50	Capacitor	180pF	50V
C78	CKDYB181J50	Capacitor	180pF	50V
C79	CEA220P10	Capacitor	22 μ F	10V

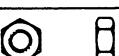
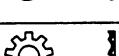
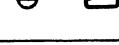
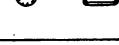
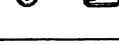
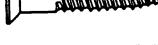
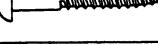
7. MISCELLANEOUS PARTS LIST

RH-65

Ref. Key	Parts No.	Description	Ref. Key	Parts No.	Description
D1	SIB01-01 or SIB01-02 or FR2-02	Diode	T1	CTT-084	Power Transformer
C1	CKDYF102Z25	Capacitor 0.001μF 25V	M	CXM-029	Motor
C2	CKDYF102Z25	Capacitor 0.001μF 25V	L1	CTF-003	Coil, 15μH
C3	CEA2R2P50	Capacitor 2.2μF 50V	HD1	CPB-019	Head
SO	QXP-009	Solenoid	VR1	CCS-140	Volume, 100kΩ (A) ✓
J1	CKN-014	Jack	VR2	CCS-140	Volume, 100kΩ (A)
J2	CKN-014	Jack	S1	S21-625	Switch
J3	CKN-047	4P Jack	S2	CSN-035	Switch
ME1	CAW-038	Meter ✓	S3	CSN-035	Switch
ME2	CAW-038	Meter	S4	CSG-048	Switch
IL1	CEL-020	Lamp, 14V 60mA	S5	CSG-040	Switch
IL2	CEL-020	Lamp, 14V 60mA	S6	CSK-006	Switch
IL3	CEL-020	Lamp, 14V 60mA			
IL4	CEL-020	Lamp, 14V 60mA ✓			
IL5	CEL-053	Lamp, 14V 60mA			
IL6	CEL-053	Lamp, 14V 60mA			
IL7	CEL-020	Lamp, 14V 60mA			
IL8	CEL-020	Lamp, 14V 60mA			

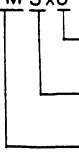
8. NOMENCLATURE OF SCREWS, WASHERS AND NUTS

The following symbols stand for screws, washers and nuts as shown in exploded view.

Symbol	Description	Shape	Symbol	Description	Shape
RT	Brazier head tapping screw		EW	E type washer	
PT	Pan head tapping screw		FW	Flat washer	
BT	Binding head tapping screw		SW	Spring lock washer	
CT	Countersunk head tapping screw		N	Nut	
TT	Truss head tapping screw		WN	Washer faced nut	
OCT	Oval countersunk head tapping screw		ITW	Internal toothed lock washer	
PM	Pan head machine screw		OTW	External toothed lock washer	
CM	Countersunk head machine screw		SC	Slotted set screw (Cone point)	
OCM	Oval countersunk head machine screw		SF	Slotted set screw (Flat point)	
TM	Truss head machine screw		HS	Hexagon socket headless set screw	
BM	Binding head machine screw		OCW	Oval countersunk head wood screw	
PSA	Pan head screw with spring lock washer		CW	Countersunk head wood screw	
PSB	Pan head screw with spring lock washer and flat washer		RW	Round head wood screw	
PSF	Pan head screw with flat washer				

EXAMPLE

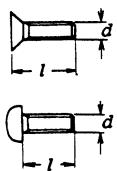
PM 3 x 8



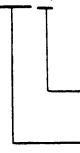
length in mm (l)

diameter in mm (d)

Symbol



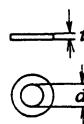
FW 9φ x 1t



thickness in mm (t)

diameter in mm (d)

Symbol



NOTICE: Parts whose parts numbers are omitted are subject to being not supplied.

11. PACKING METHOD (RH-65KU) RH-65

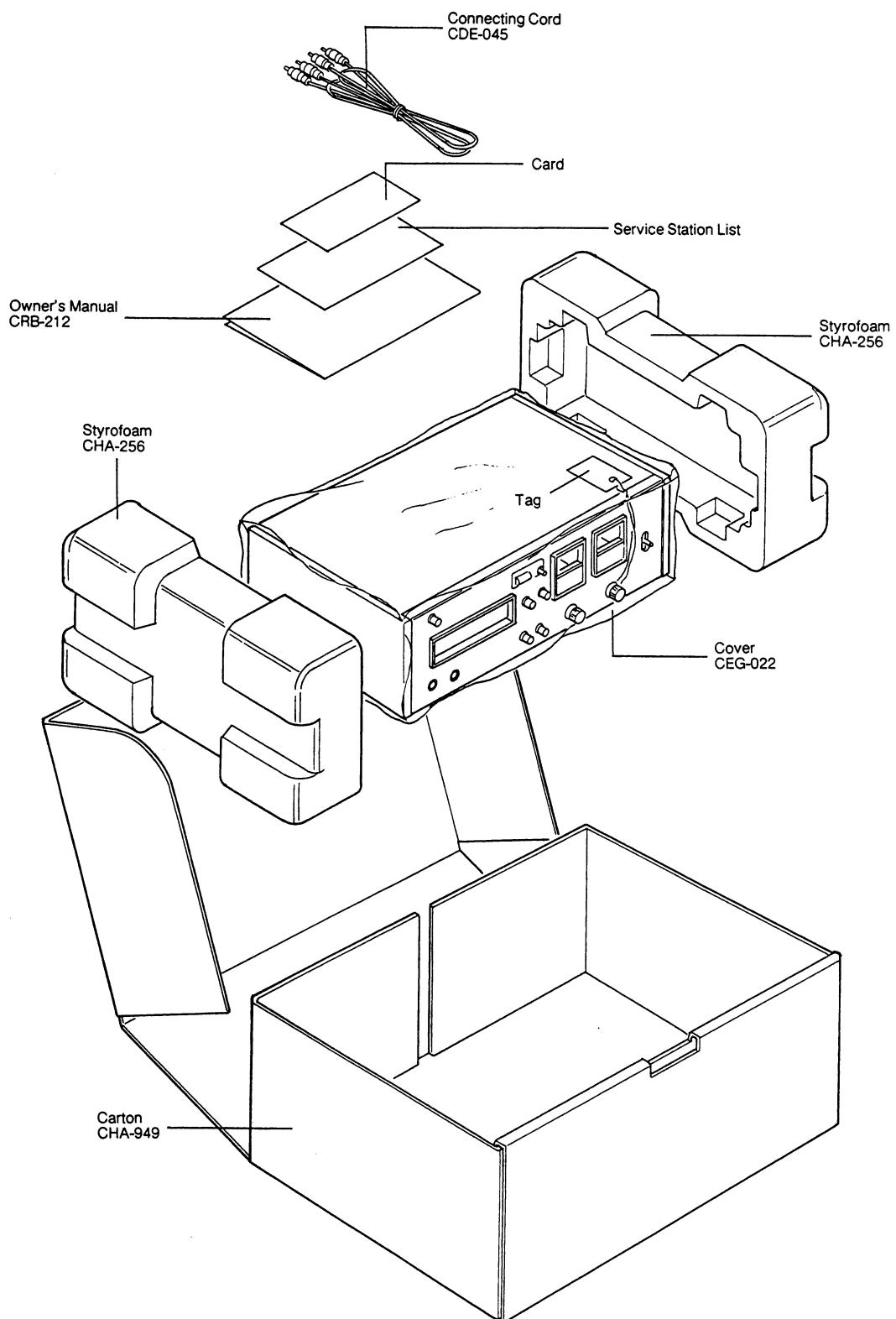


Fig. 16

12. PACKING METHOD (RH-65KC)

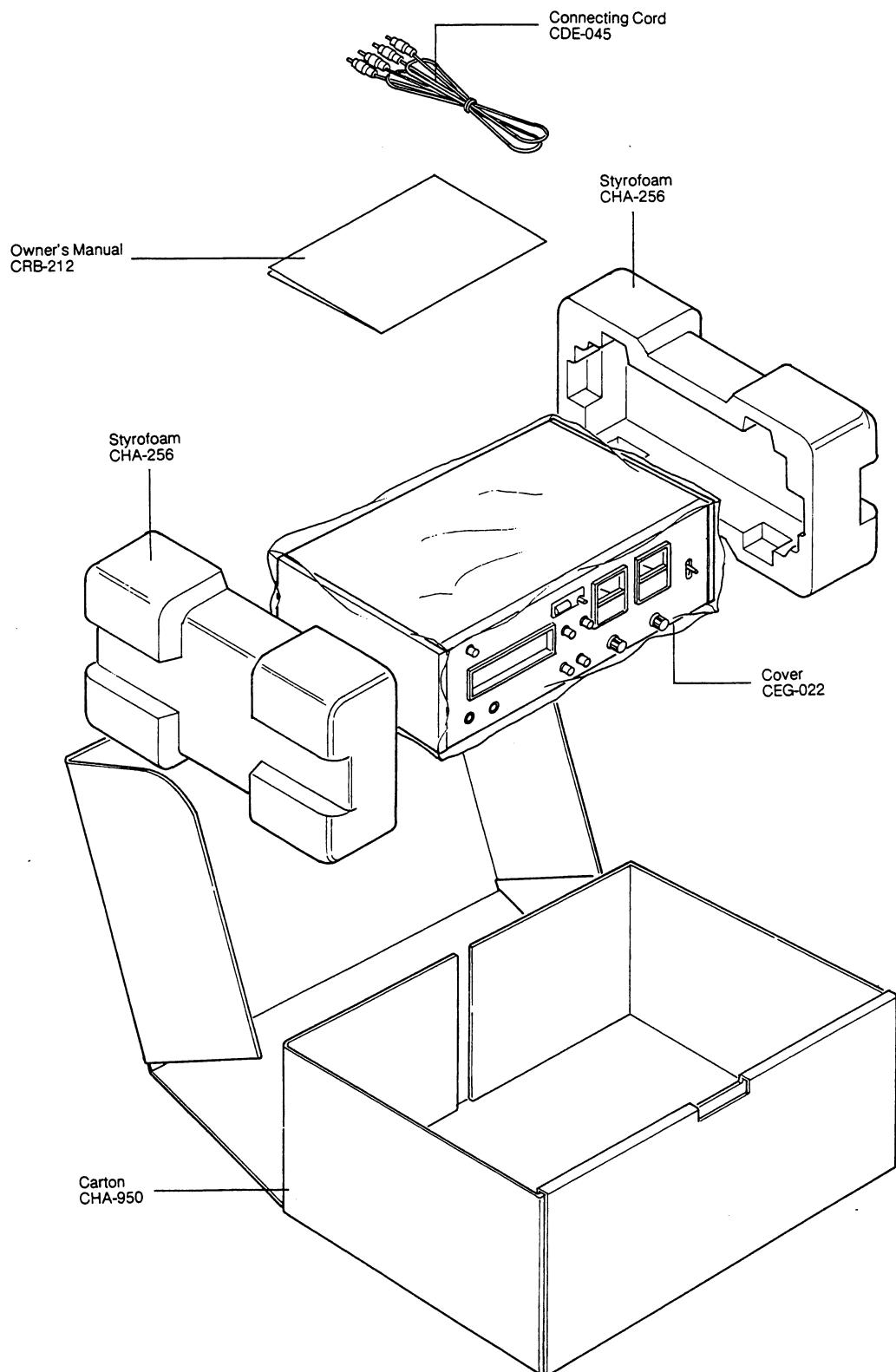


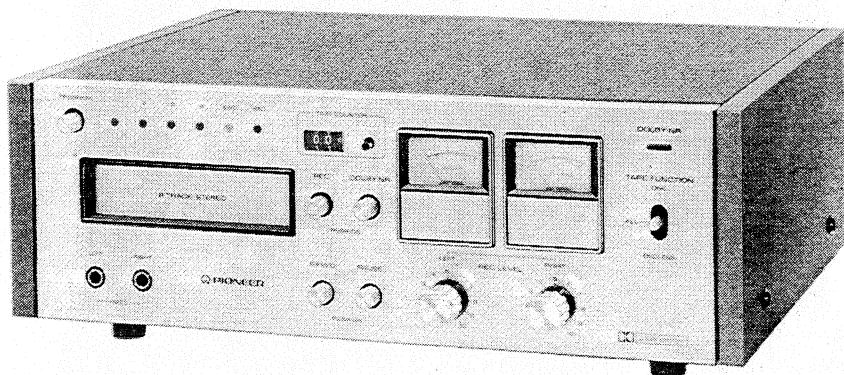
Fig. 17

RH-65

DOLBY SYSTEM

8 TRACK HOME STEREO
RECORDING DECK

SERVICE MANUAL



SPECIFICATIONS

Semi-Conductors	2 IC's, 17 transistors, 16 diodes, 1 thyristor
Power Source	AC 120/220/240V 50/60Hz
Power Consumption	No more than 30W
Cartridge	Any 8 track cartridges
Wow and Flutter	No more than 0.15% (WRMS)
Fast Forward Time	Approx. 2 times
Frequency Response	30 ~ 15,000 Hz
Cross Talk	More than 45 dB
Signal to Noise Ratio	More than 45 dB
Input Level	Mic: 0.5 mV (Typical) Line: 100 mV (Typical)
Input Impedance	Line: 100 kΩ
Output Level	Line: 580 mV
Output Impedance	Line: 80Ω

RECORDING SECTION

Erasing Ratio	More than 50 dB
Dimensions (W x H x D)	375 x 115 x 275mm (14-3/4 x 4-1/2 x 10-7/8 in.)
Weight	6.1 kg (13.4 lbs.)

"Manufactured under license from Dolby Laboratories Inc."
"The word 'Dolby' and  are trade marks of Dolby Laboratories Inc."

Note:
Specifications and the design subject to possible modification without notice
due to improvements.

 PIONEER®

PARTS LOCATION

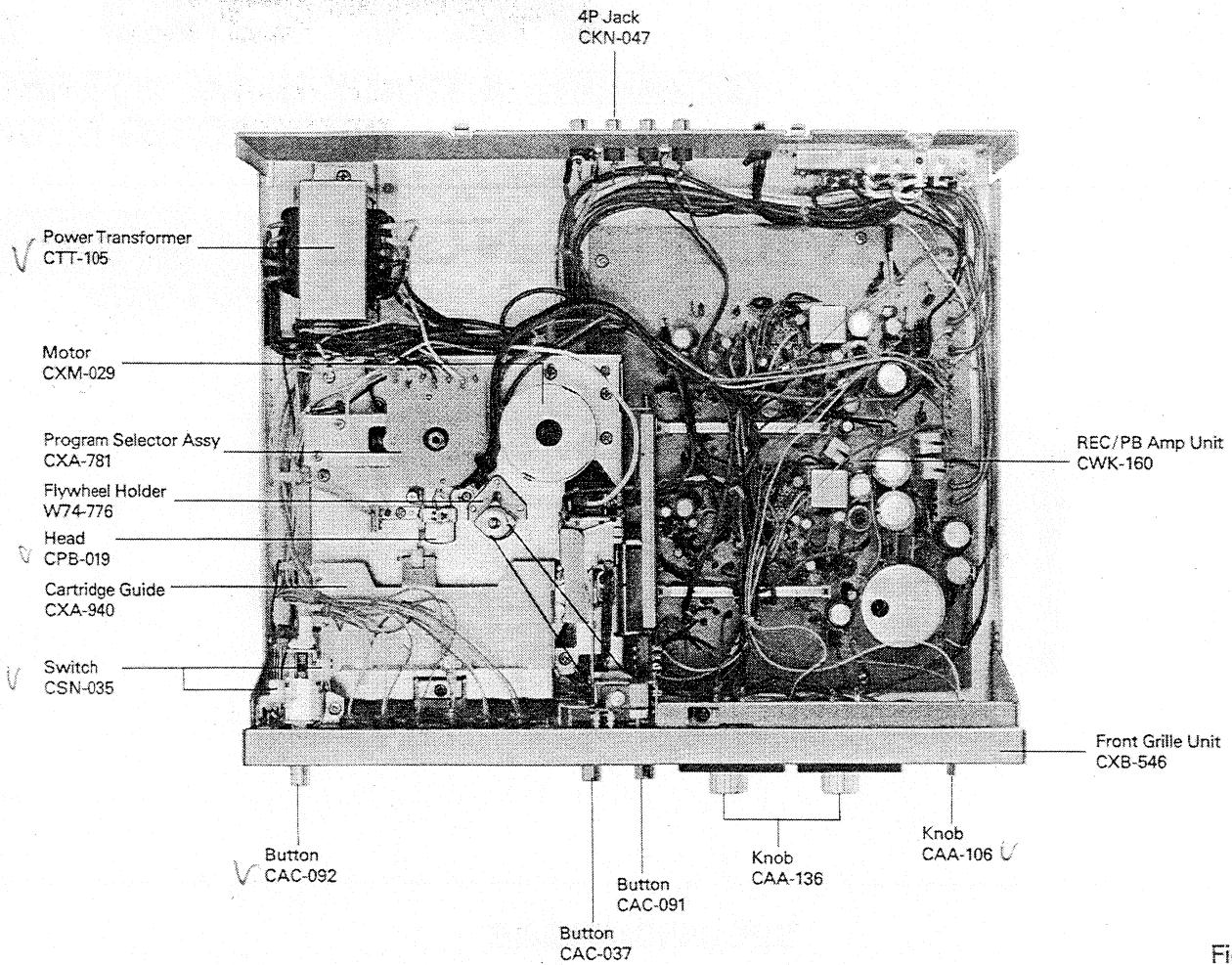
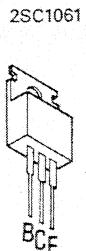


Fig. 1

• IC's and Transistors

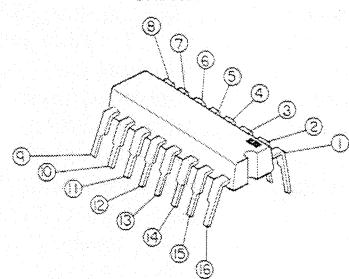
2SC644
2SC828
2SC1318



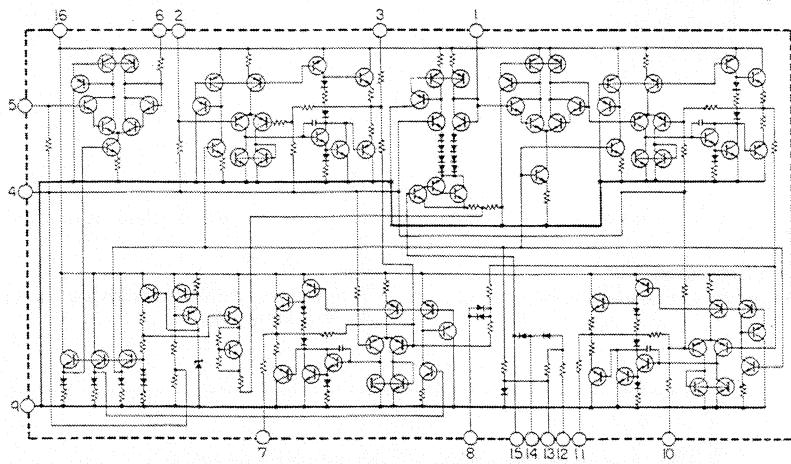
2SD471



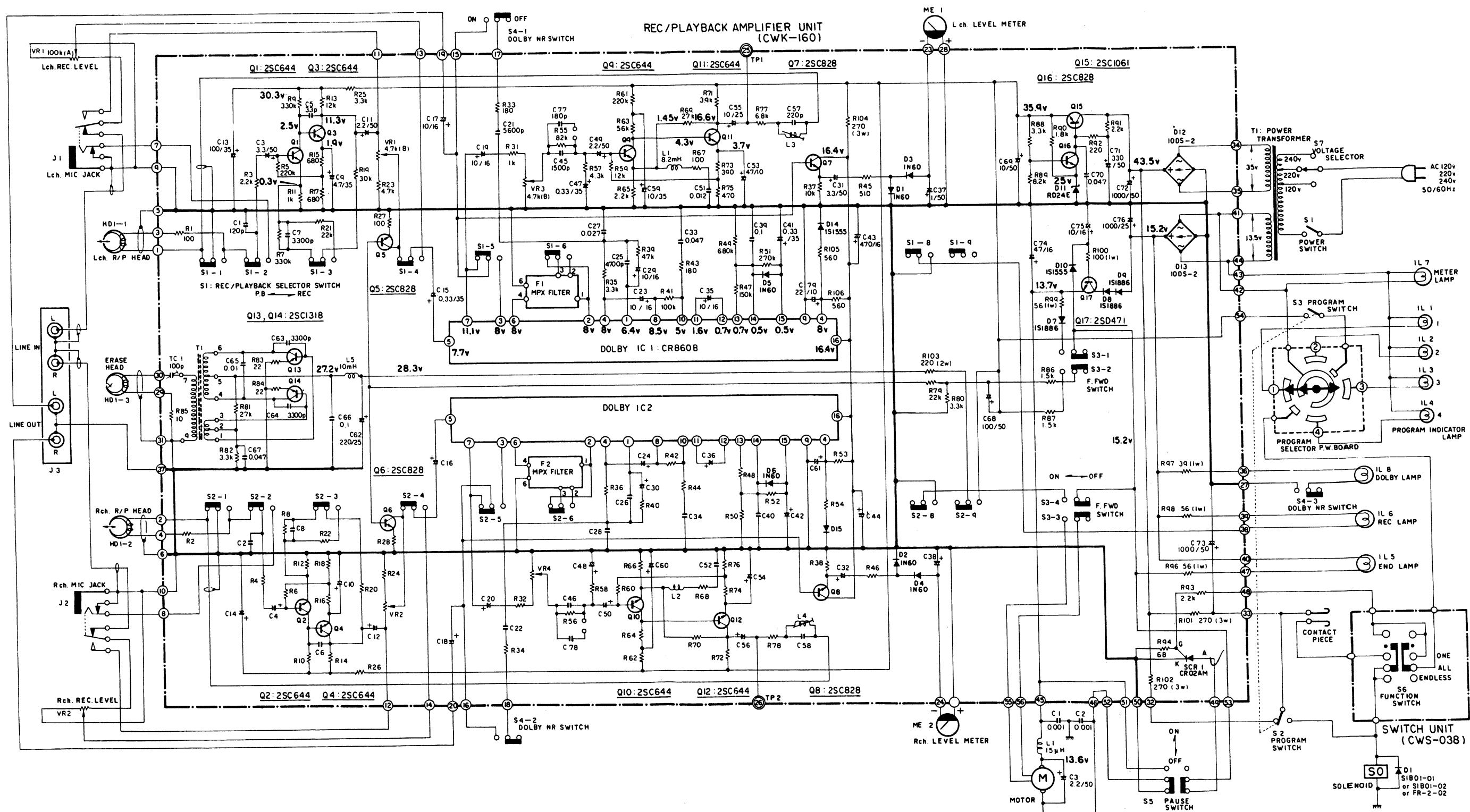
CR860B



CR860B



SCHEMATIC CIRCUIT DIAGRAM



REC/PB AMP UNIT (CWK-160) RH-65

This list shows the difference of parts for RH-65 ^{KU} _{KC} and RH-65D. Page numbers in the list refer to RH-65 ^{KU} _{KC} Service Manual.

• Parts List

NOTICE: Of the descriptive symbols of the resistor and capacitor, the encircled alphabetic letter denotes the allowable error.

Example: RD1/4VS100 (J) C:±0.25pF F:±1pF J:±5% M:±20% Z: +80% -20%

CEA100 (P) 25 D:±0.5pF G:±2% K:±10% X: +40% -20% P: +100% -10%

RESISTORS

RH-65 ^{KU} _{KC}			RH-65 D		
(CWK-160)			(CWK-160)		
Ref. Key	Parts No.	Description	Parts No.	Description	
R93	RD1/4VS103J	Resistor 10kΩ 1/4W	RD1/4VS222J	Resistor 2.2kΩ 1/4W	
R94	RD1/4VS681J	Resistor 680Ω 1/4W	RD1/4VS680J	Resistor 68Ω 1/4W	

CAPACITORS

RH-65 ^{KU} _{KC}			RH-65 D		
(CWK-160)			(CWK-160)		
Ref. Key	Parts No.	Description	Parts No.	Description	
C57	CKDYB221J50	Capacitor 220pF 50V	CKDYB221K50	Capacitor 220pF 50V	
C58	CKDYB221J50	Capacitor 220pF 50V	CKDYB221K50	Capacitor 220pF 50V	

RH-65 ^{KU} _{KC}			RH-65 D		
Page	Parts No.	Description	Parts No.	Description	
17	CTT-084	Power Transformer	CTT-105	Power Transformer	
19	CXB-442	Front Grille Unit	CXB-546	Front Grille Unit ✓	
20	CTT-084	Power Transformer	CTT-105	Power Transformer ✓	
20	.....	.....	CKA-003	Voltage Selector ✓	Add
20	.....	.....	CND-180	Switch Holder ✗	Add
23	CRB-212	Owner's Manual	CRB-242	Owner's Manual ✓	
23	CHA-949	Carton	CHB-059	Carton	

5. SCHEMATIC CIRCUIT DIAGRAM

RH-65

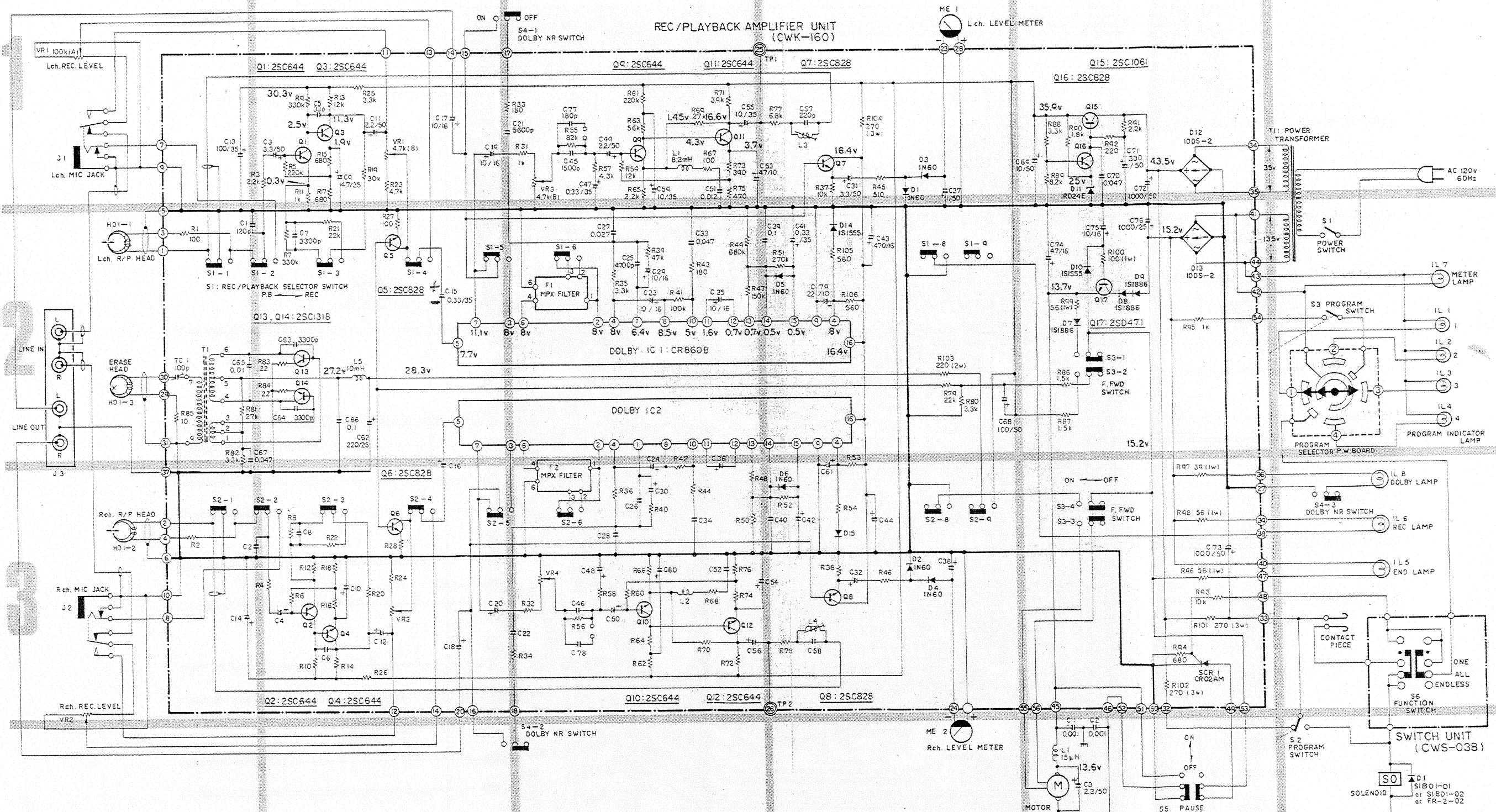


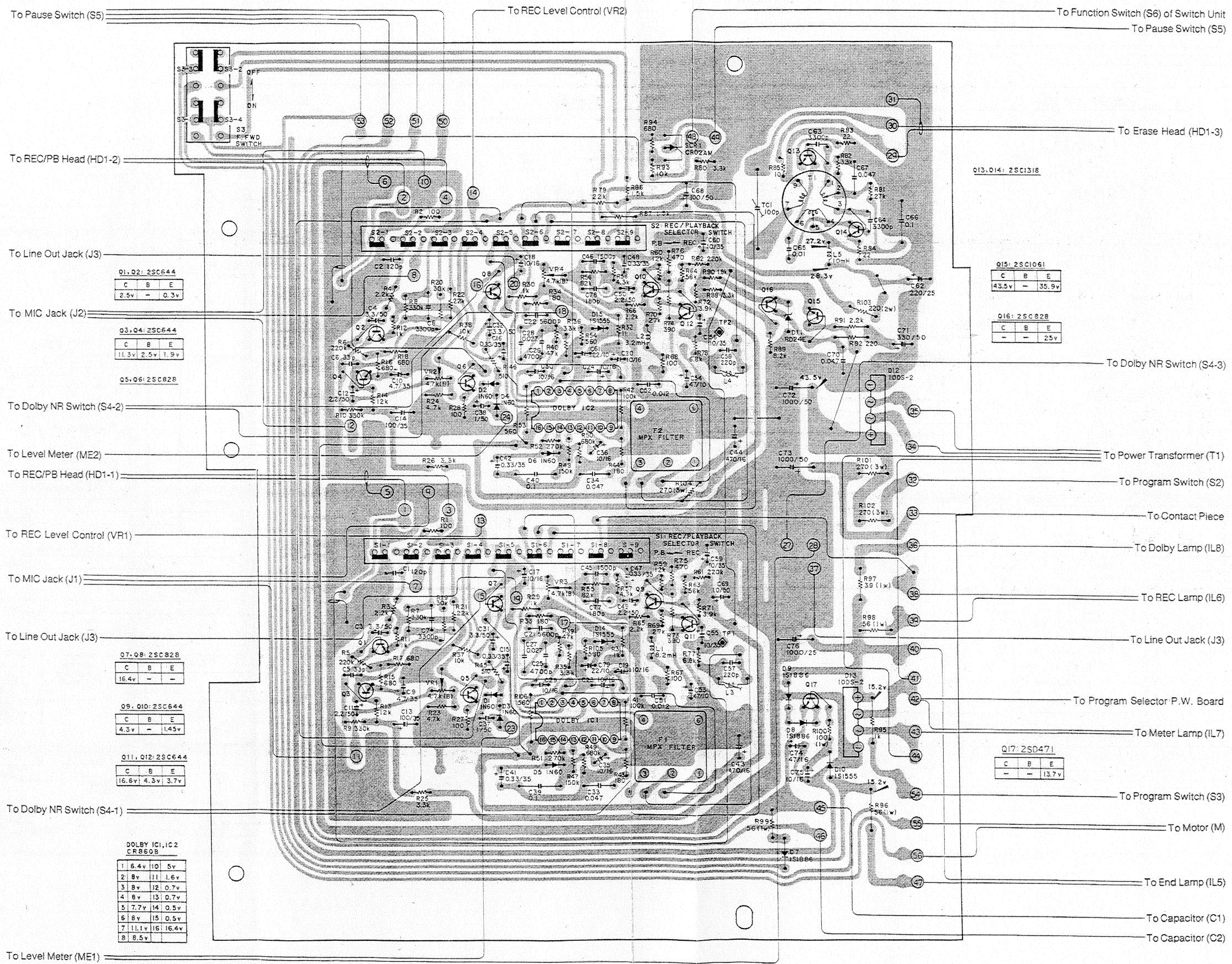
Fig. 12

6. REC/PB AMP UNIT (CWK-160)

RH-65

REC/PB AMP UNIT (CWK - 160)

• Parts Connection



9. CHASSIS EXPLODED VIEW

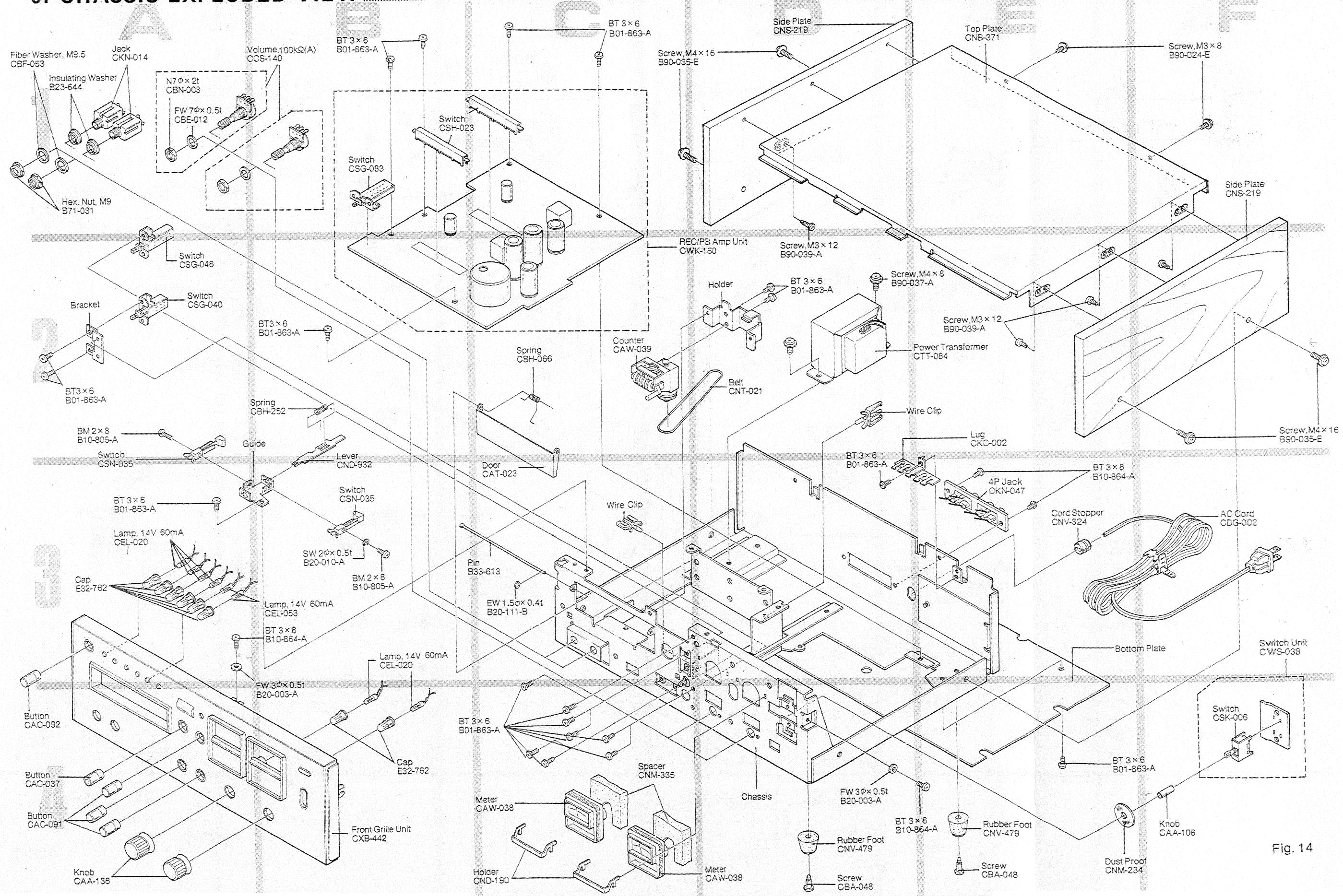


Fig. 14

10. 8 TRACK MECHANISM EXPLODED VIEW

III RH-65

NOTICE: Parts whose parts numbers are omitted are subject to being not supplied.

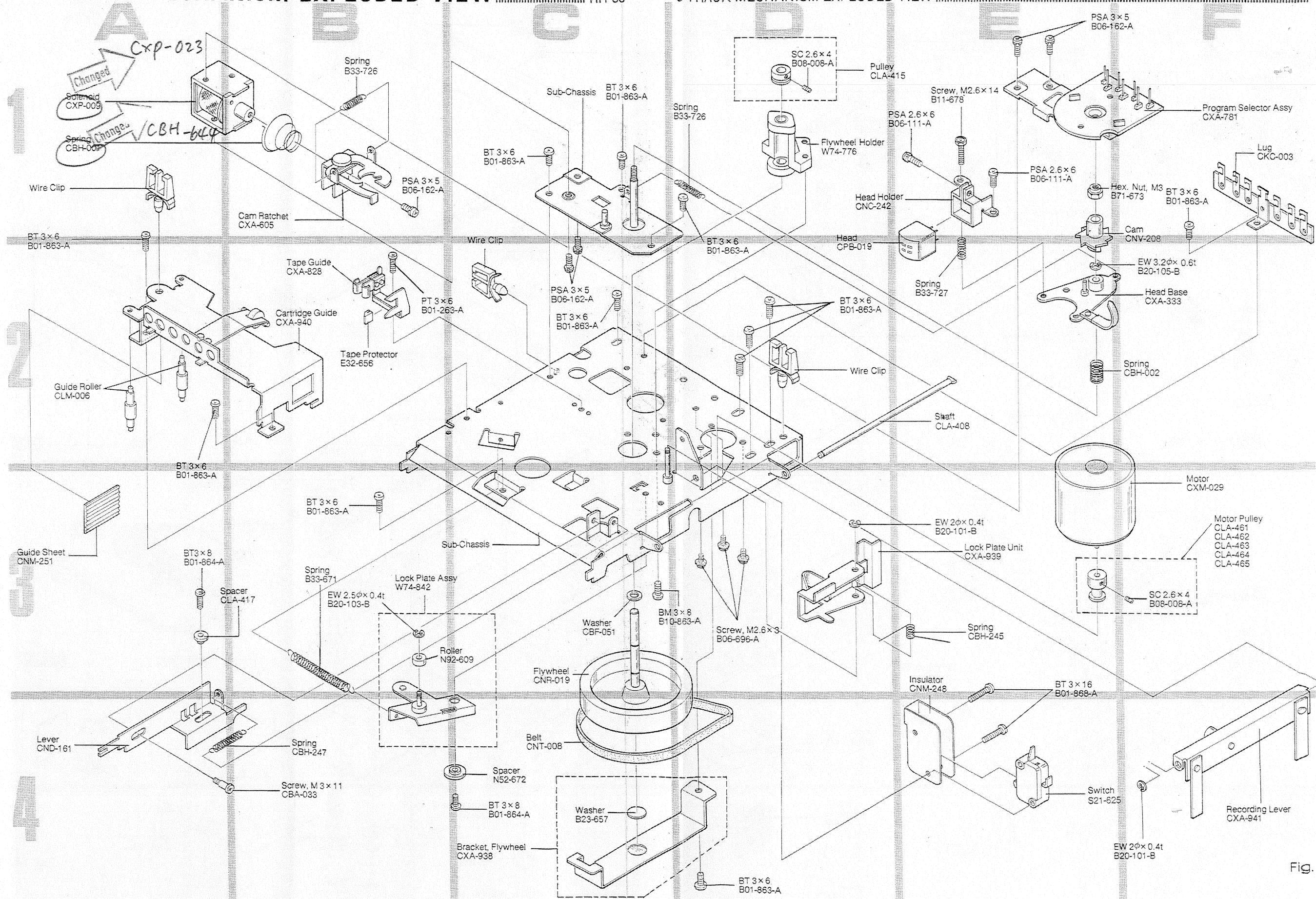


Fig. 15